DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114 was filed in this application

after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the

appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and

the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn

pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to

37 CFR 1.114. Applicant's submission filed 21 June 2011 has been entered.

Status of the Claims

2.   Claims 1, 11, 12, 14, and 21 are pending. Claims 2-10, 13, and 15-20 have been

canceled.

Response to Arguments

3.   Where Applicant contends, on page 10 of the remarks, that the cited prior art

references and any combination thereof would not render the claims obvious, nor would it

have been obvious to combine the references, the examiner respectfully submits that the

grounds of rejection currently presented herein adequately indicate sufficient teachings of

the claimed limitations in the cited prior art as well as reasonable motivations and rationales

to combine the references as indicated in the cited prior art. Any previous remarks are

hereby incorporated by reference.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to a
> person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

6.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent

any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to

point out the inventor and invention dates of each claim that was not commonly owned at

the time a later invention was made in order for the examiner to consider the applicability of

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7.   Claims 1, 11, 12, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Komori (US Pat. No. 6,046,937, hereinafter Komori) in view of Yoshino et al. (US Pub.

No. 2002/0083282, hereinafter Yoshino) and Shibazaki et al. (US Pub. No. 2001/0014933,

hereinafter Shibazaki).

Regarding Claim 1, Komori teaches a recording medium comprising a nonvolatile

recording area for storing data (col. 4, lines 41-66), an update notification part for updating

update information of the time of writing or erasing of data to the nonvolatile recording area

and holding the update information in the nonvolatile recording area, a host interface part

for communicating with a data processing apparatus (col. 4, lines 16-30 and 41-66), a

controller for reading and writing data from and to the nonvolatile recording area and

supplying the data in the nonvolatile recording area and the update information to the data

processing apparatus via the host interface part, wherein update information in the update

notification part can be read from the data processing apparatus and cannot be written by the

data processing apparatus (from col. 4, line 63 to col. 5, line 3; col. 7, lines 28-38 and 46-53;

Fig. 1, item 16). It is noted that Komori may not specifically teach, but Yoshino suggests,

that the update information in said update notification part is updated only immediately

before data of said recording area is first updated after initialization processing of the

recording medium (¶ [0283] lines 1-10; ¶ [0284] lines 1-7: the update notification, as

previously taught by Komori, in such a manner as to take place after initialization of the

medium and before recording, thereby takes place immediately before the first update).

Hence, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Komori and Yoshino, because, as Yoshino

further suggests (¶ [0290]), such an arrangement could make more efficient use of recording

media.   It is noted that Komori and Yoshino may not explicitly disclose, but Shibazaki

suggests, that the update information in said update notification part is updated only

immediately before data of the nonvolatile recording area is first updated after initialization

processing of said recording medium is conducted at a time when the recording medium is

inserted into the data processing apparatus (¶ [0062]: inserting a recording medium into a

slot on a data processing apparatus and accessing the recording medium; ¶ [0064] and

¶ [0065]: read and write; ¶¶ [0071]-[0076]: initialization processing of inserted medium).

Hence, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Komori, Yoshino, and Shibazaki, so as to

take advantage of the flexibility of removable nonvolatile memory storage, as is commonly

known in the art in the case of such processing that is to occur on a recording medium

without autonomous processing capability and a power supply built in, then the recording

medium would necessarily be interfaced with a data processing apparatus, such as by

insertion into a slot on the apparatus.

Regarding Claim 11, Komori teaches that the nonvolatile recording area includes a data storage area which stores one or more pieces of data (col. 3, lines 25-44; col. 4, line 61 through col. 5, line 3). It is noted that Komori does not specifically teach a search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and at least one of the data storage areas has a field for storing update information in the update notification part. However, Yoshino suggests a search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and at least one of the data storage areas has a field for storing update information in the update notification part (¶ [0030] lines 1-12; ¶ [0264] lines 1-10; ¶ [0265] lines 1-11). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori and Yoshino, so as to optimize the management of relevant information associated with data for processing.

Regarding Claim 12, Komori teaches that the nonvolatile recording area includes a data storage area which stores one or more pieces of data (col. 3, lines 25-44; col. 4, line 61 through col. 5, line 3). It is noted that Komori does not specifically teach search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and the search information storage area has the field for storing update information in the update notification part immediately after

the data is updated. However, Yoshino suggests search information storage area which stores

search information required when the data processing apparatus takes out each data stored in

the data storage area, and the search information storage area has the field for storing update

information in the update notification part immediately after the data is updated (¶ [0030]

lines 1-12; ¶ [0264] lines 1-10; ¶ [0265] lines 1-11). Hence, it would have been obvious to

one of ordinary skill in the art at the time the invention was made to combine the teachings

of Komori and Yoshino, so as to optimize the management of relevant information associated

with data for processing.

Regarding Claim 14, Komori teaches a data processing method, wherein a recording

medium includes: a nonvolatile recording area for storing data (col. 4, 41-66), an update

notification part for holding update information of data in the nonvolatile recording area

(col. 4, lines 16-30 and 41-66), and a controller for reading and writing data from and to the

recording area and supplying the data in the nonvolatile recording area and the update

information to a data processing apparatus (col. 4, lines 16-30 and 41-66; col. 7, lines 14-38

and 46-53), and the data processing apparatus includes a data processor for reading data of

the recording medium and temporarily storing the data and performing a data processing on

the basis of update information read from the recording medium in the update notification

part, comprising the steps of making possible for update information in the update

notification part in the nonvolatile recording area to be read from the data processing

apparatus and impossible for update information to be written by the data processing

apparatus, and updating the update information by the controller at the time of writing or

erasing of data to the nonvolatile recording area (col. 4, lines 16-30 and 41-66; col. 4, line 63

through col. 5, line 3; col. 7, lines 14-38 and 46-53), and determining whether or not data of

the nonvolatile recording area in the recording medium has been updated by reading update

information in the update notification part of the recording medium (col. 7, lines 14-38 and

46-53; col. 8, lines 12-45). It is noted that Komori does not specifically teach a slot to which

the recording medium is attached. However, Shibazaki suggests a slot to which a recording

medium is attached (¶ [0062] lines 1-9). Hence, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to combine the teachings of

Komori and Shibazaki, so as to take advantage of the flexibility of removable nonvolatile

memory storage. It is noted that Komori and Shibazaki may not specifically disclose, but

Yoshino suggests, determining whether or not data of said recording area in the recording

medium has been updated after said data was recorded by determining whether or not

update information of field in the recording area read from said recording medium

corresponds to update information in said update notification part read from said recording

medium (¶ [0245]; ¶ [0474] lines 1-9; ¶ [0475] lines 1-6). Hence, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to combine the

teachings of Komori, Shibazaki, and Yoshino, because, as Yoshino further suggests (¶ [0244];

¶ [0260]), such arrangements could provide for more reliable use of recording media.

Regarding Claim 21, Komori suggests a recording medium comprising a nonvolatile

recording area for storing data (col. 4, lines 41-66); an update notification part for updating

update information of the time of writing or erasing of data to said nonvolatile recording area

and holding said update information in said nonvolatile recording area; a host interface part

for communicating with a data processing apparatus(col. 4, lines 16-30 and 41-66); and a

controller for reading and writing data from and to said nonvolatile recording area and

supplying the data in said nonvolatile recording area and said update information to said data

processing apparatus via said host interface part, wherein update information in said update

notification part can be read from said data processing apparatus and cannot be written by

said data processing apparatus (from col. 4, line 63 to col. 5, line 3; col. 7, lines 28-38 and 46-

53; Fig. 1, item 16; host interface being a necessary component for supplying the data). It is

noted that Komori may not specifically teach, but Yoshino suggests, that update information

in said update notification part is updated only immediately before data of said nonvolatile

recording area is first updated after initialization processing of said recording medium (¶

[0283] lines 1-10; ¶ [0284] lines 1-7: the update notification, as previously taught by Komori,

in such a manner as to take place after initialization of the medium and before recording,

thereby takes place immediately before the first update). Hence, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori and Yoshino, because, as Yoshino further suggests (¶ [0290]), such an arrangement could make more efficient use of recording media. It is noted that Komori and Yoshino may not explicitly disclose, but Shibazaki suggests, that the update information in said update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of said recording medium is conducted at a time when the recording medium is inserted into the data processing apparatus (¶ [0062]: inserting a recording medium into a slot on a data processing apparatus and accessing the recording medium; ¶ [0064] and ¶ [0065]: read and write; ¶¶ [0071]-[0076]: initialization processing of inserted medium). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori, Yoshino, and Shibazaki, so as to take advantage of the flexibility of removable nonvolatile memory storage, as is commonly known in the art in the case of such processing that is to occur on a recording medium without autonomous processing capability and a power supply built in, then the recording medium would necessarily be interfaced with a data processing apparatus, such as by insertion into a slot on the apparatus. Yoshino further suggests that the controller reads the update information in said update notification part prior to the reading or writing of data and then reads the update information in said update notification part again and compares the values of the update information prior to reading or

writing and following reading or writing to determine if the values correspond to each other

for further processing (reading and rereading of update information is sufficiently suggested

by Komori as noted above; ¶ [0260] and ¶ [0296]: here, Yoshino shows performing a

comparison of ID information of a present medium, which may be updated, with that of a

predetermined list of predetermined ID information, which may have been read previously,

and which may also be updated, as per ¶ [0236] and ¶ [0243], respectively, and according to

the comparison, further processing is determined, as per ¶ [0296]). Hence, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

combine the teachings of Komori and Yoshino, because, as Yoshino further suggests

(¶ [0290]), such an arrangement could make more efficient use of recording media.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel J. Bernard whose telephone number is 571-270-7840.

The examiner can normally be reached on Monday through Thursday, 9:00 AM - 7:00 PM,

Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Reginald G. Bragdon can be reached on 571-272-4204. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information

for unpublished applications is available through Private PAIR only. For more information

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571-272-1000.

/D. J. B./
Examiner, Art Unit 2189

/Reginald G. Bragdon/
Supervisory Patent Examiner, Art Unit 2189